Amendments to the Claims:

This listing of claims will replace all prior versions, and listing of claims in the Application:

Listing of Claims:

Claims 1-47 (cancelled).

48. (New) A method for updating spreading codes assigned to wireless terminals in a CDMA wireless communication system, comprising:

(a) identifying a target wireless terminal having a signal to interference-plus-noise ratio below a predetermined threshold;

(b) assigning a new spreading code to the target wireless terminal identified in paragraph (a), by searching for an optimal signal signature corresponding to the new spreading code so as to reduce signal interference between the wireless terminals when in reverse link communication with a base station;

(c) forwarding the new spreading code to the target wireless terminal identified in paragraph (a); and

(d) repeating operational acts specified in paragraphs (a), (b), and (c) on an iterative basis.

49. (New) The method as recited in Claim 48, further comprising adjusting a transmission delay of the target wireless terminal identified in paragraph (a).

50. (New) The method as recited in Claim 48, wherein the act of searching for an optimal signal signature corresponding to the new spreading code described in paragraph (b) comprises selecting a random spreading code out of a set of unused spreading codes associated with a region of signal space that is less dense when compared other regions of signal space.

51. (New) The method as recited in Claim 48, wherein the searching for an optimal signal signature corresponding to the new spreading code described in paragraph (b) comprises selecting a random spreading code out of a set of unused spreading codes associated with a region of signal space that is less dense when compared other regions of signal space, and further testing the randomly selected code to ascertain whether there is an improvement of the signal to interference-plus-noise ratio for the identified wireless terminal.

52. (New) The method as recited in Claim 48, wherein the searching for an optimal signal signature corresponding to the new spreading code described in paragraph (b) comprises selecting random a spreading code out of a set of unused spreading codes associated with a region of signal space that is less dense when compared other regions of signal space, and further testing the randomly selected code to ascertain whether there is an improvement of the signal to interference-plus-noise ratio for the identified wireless terminal; and selecting another spreading code in proximity to the set of unused spreading codes associated with a region of signal space that is less dense if there is no improvement in the signal to interference-plus-noise ratio for the identified wireless terminal.

53. (New) The method as recited in Claim 48, wherein the searching for an optimal signal signature corresponding to the new spreading code described in paragraph (b) comprises performing a gradient search for the optimal signal signature.

54. (New) A method for assigning codes to wireless terminals in a CDMA wireless communication system, comprising:

estimating propagation characteristics of at least one channel used to communicate from at least one of the wireless terminals to a base station in a reverse link of the CDMA wireless communication system;

assigning spreading codes to the wireless terminals based on the estimated propagation characteristics of the at least one channel, wherein the act of assigning the spreading codes comprises:

(a) identifying a target wireless terminal having a signal to interference-plus-noise ratio below a predetermined threshold;

(b) assigning a new spreading code to the target wireless terminal identified in paragraph (a), by searching for an optimal signal signature corresponding to the new spreading code so as to reduce signal interference between the wireless terminals when in reverse link communication;

(c) forwarding, in a forward link of the CDMA wireless communication system, the new spreading code to the target wireless terminal identified in paragraph (a); and

(d) repeating operational acts specified in paragraphs (a), (b), and (c) on an iterative basis.

55. (New) A system for assigning codes to wireless terminals, the system comprising:

means for estimating propagation characteristics of at least one channel used to communicate from at least one of the wireless terminals to a base station in a reverse link of the CDMA wireless communication system;

means for assigning spreading codes to the wireless terminals based on the estimated propagation characteristics of the at least one channel, wherein the act of assigning the spreading codes comprises:

(a) means for identifying a target wireless terminal having a signal to interference-plus-noise ratio below a predetermined threshold;

(b) means for assigning a new spreading code to the target wireless terminal identified in paragraph (a), by searching for an optimal signal signature corresponding to the new spreading code so as to reduce signal interference between the wireless terminals when in reverse link communication;

(c) means for forwarding, in a forward link of the CDMA wireless communication system, the new spreading code to the target wireless terminal identified in paragraph (a); and

(d) means for repeating operational acts specified in paragraphs (a), (b), and (c) on an iterative basis.

56. (New) Apparatus for communicating with a plurality of wireless terminals via a plurality of channels, said apparatus comprising:

a channel estimator for estimating channel propagation characteristics;

a code optimizer for assigning spreading codes to the plurality of wireless terminals based on the estimated channel propagation characteristics, wherein the codes are spreading codes; wherein the code optimizer comprises a memory storing computer program instructions; a processor for executing said stored computer program instructions; the computer program instructions defining acts of assigning spreading codes to the plurality of wireless terminals by:

(a) identifying a target wireless terminal having a signal to interference-plus-noise ratio below a predetermined threshold;

(b) assigning a new spreading code to the target wireless terminal identified in paragraph (a), by searching for an optimal signal signature corresponding to the new spreading code so as to reduce signal interference between the wireless terminals when in reverse link communication;

(c) forwarding, in a forward link of the CDMA wireless communication system, the new spreading code to the target wireless terminal identified in paragraph (a); and

(d) repeating operational acts specified in paragraphs (a), (b), and (c) on an iterative basis for other wireless terminals.